IN THE CLAIMS:

Claim 1 has been amended as follows:

1. (Currently Amended) A method to produce a volume data set, comprising the steps of:

segmenting an imaged surface of a subject imaged in a first volume data set;

transforming the first volume data set into a second volume data set, causing the segmented imaged surface and its environment to be transformed into a plane; and

producing a third volume data set by filtering the second volume data set such that structures ~~not~~ of no interest of the subject, imaged in the second volume data set, are filtered out based on features associated in general with structures ~~not~~ of no interest and based on expected ~~removals~~ distances from the surface of the structures ~~not~~ of no interest, and such that structures of interest of the subject, imaged in the second volume data set ~~(50)~~, remain, based on features associated with structures of interest, and based on the expected ~~removals of the structures not of interest~~ from the surface of the structures of no interest.

Claim 2 has been amended as follows:

2. (Currently Amended) A method as claimed in claim 1, wherein the subject is a first subject and wherein at least one imaged second subject ~~that~~ is disposed outside of the first subject, ~~and~~ comprising filtering out the imaged second subject from the second volume data set with the non-interesting imaged structures.

Claim 3 has been amended as follows:

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3. (Currently Amended) A method as claimed in claim 1 comprising filtering the second volume data set by at least one of a density-oriented, texture-oriented, edge-sensitive and morphological filtering associated with at least one of the structures ~~not~~ of no interest and the structures of interest.

Claim 4 has been amended as follows:

4. (Currently Amended) A method as claimed in claim 1 comprising obtaining the first volume data set as a number of successive computed tomographic slice images, with image data of each slice image described with Cartesian coordinates and comprising, for segmenting the imaged body surface:

> ~~implementing~~ performing a coordinate transformation for each slice image to polar coordinates with regard to a straight line ~~(G)~~ that proceeds through the imaged subject and that is aligned substantially at a right angle to the individual slice images;

> determining contours that are imaged in each transformed slice image and that are associated with the imaged surface;

> transforming the image points of the determined contours back into the coordinate system associated with the first volume data set; and

> re-extracting image points along the contours for representing the surface of the imaged first subject transformed according to a ~~in the~~ plane, for generating a second dataset.

5. (Original) A method as claimed in claim 4 comprising producing a fourth volume data set in which the image points of the third volume data set are transformed back into the coordinate system associated with the first volume data set.

Claim 6 has been amended as follows:

6. (Currently amended) A method as claimed in claim 5 comprising ~~representing~~ <u>displaying</u> an image associated with the fourth volume data set by volume rendering.